

Defense Science & Technology Seminar on Emerging Technologies

Augmented Reality for the Mobile Warfighter

Sponsored by the

Deputy Under Secretary of Defense for
Science & Technology

Chief of Naval Research

Director, Defense Advanced Research Projects Office

Friday, April 9, 1999

Crystal City Marriott (Crystal Forum)
1999 Jefferson Davis Highway
Arlington, VA 22202

Phone: (703) 413-5500 Reservations: (800) 228-9290

Agenda

0830 *Welcome*
Opening Remarks

Dr. Delores Etter, DUSD (S&T)
RADM Paul Gaffney, Chief of Naval
Research

Dr. Charles Holland, ODUSD(S&T)
Information Systems

ONR/NRL Battlefield Augmented Reality
System

Dr. Larry Rosenblum, NRL

Prototype Mobile Augmented Reality
System

Prof. Steven Feiner, Columbia Univ.

Interactive Retinal Imaging Displays

Prof. Thomas Furness, Univ. of Wash.

Overview of the DARPA Warfighter
Visualization Program

Dr. Norman Whitaker, DARPA

Improving the Accuracy of Outdoor
Augmented Reality Systems

Dr. Ronald Azuma, HRL

Tracking for Augmented Reality Systems

Prof. Gary Bishop, UNC

1030 *Closing Comments/Adjournment*

Dr. Delores Etter, DUSD(S&T)

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Dear Colleague:

We are pleased to invite your participation in the Defense Science and Technology Seminar on "Augmented Reality for the Mobile Warfighter," which is being co-sponsored by the Deputy Under Secretary of Defense for Science and Technology, the Chief of Naval Research and the Director of the Defense Advanced Research Projects Agency. The seminar will be held on Friday, April 9, 1999, at the Crystal City Marriott (Crystal Forum), 1999 Jefferson Davis Highway, Arlington, Virginia. A copy of the agenda and other information relevant to registration and attendance at the seminar are enclosed.

The seminar is the sixth in a continuing series initiated in the fall of 1998 to promote dialogue among military leaders, members of the Defense science and technology community, and leading researchers from industry and academia on topics of growing interest and importance to the Department of Defense. The seminars are held on a regular basis each month featuring a number of short presentations by distinguished researchers in the field that are intended to provide useful insights in a technology area offering significant military payoffs.

The topic of Augmented Reality for the Mobile Warfighter was selected because augmented reality is an emerging technology that will provide the warfighter in the field (especially in the "urban canyon") with a revolutionary capability to visualize critical information without interrupting warfighting activities. The seminar will focus on the underlying technological and scientific advances that are letting us exploit the potential of augmented reality. Speakers will discuss a seminal mobile augmented reality prototype system, new sensors and algorithms to more accurately register (align) computer-generated images with the real world, human-computer interface issues whose solution will make mobile augmented reality work, and novel 3D see-through display devices.

We trust that you will find this seminar informative and productive. At the end of the seminar, please take advantage of the opportunity to suggest topics for future S&T seminars by filling out the comment sheet that will be provided. We hope to promote the development of novel approaches for addressing Defense needs and advanced military systems through better understanding of current operational and technological challenges. Your participation in the S&T seminars will help us to achieve our objective.

Sincerely,

Delores M. Etter
Deputy Under Secretary of Defense
(Science and Technology)

RADM Paul Gaffney, USN
Chief of Naval Research
Office of Naval Research
F. L. Fernandez
Director, Defense Advanced
Research Projects Agency

Enclosures